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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Denis Eugene

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EXAMINER

LEONARD, MICHAEL L

ART UNIT

PAPER NUMBER

4131

MAIL DATE

DELIVERY MODE

09/26/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/560,606	Applicant(s) EUGENE ET AL.	
	Examiner MICHAEL LEONARD	Art Unit 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 1/16/2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 17-32 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/13/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 101

1. Claim 30 is rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 17-23 and 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Firstly, the language "obtainable by" renders the claims indefinite because it fails to particularly point out and distinctly claim the invention since one cannot determine from the phrase just which compositions are "obtainable by" applicants process and which are not.

Secondly, claim 23 the applicant uses the term "degree of urethanisation" which is undefined in the specification and renders the claim indefinite.

Thirdly, claim 30 provides for the use of a polyurethane resin as a film forming binder in printing inks for printing plastic substrates, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use

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without any active, positive steps delimiting how this use is actually practiced. *In re Fong* 129 USPQ 264.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 17-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,251,988 to *Blum et. al.* in view of U.S. Patent No. 6,403,752 to *House et. al.*

As to claims 17, 18, 22-26, 27-30 Blum discloses a coating containing a polyurethane resin (Column 2, lines 44-48) and a method for its production comprising the reaction product of a) polyether polyols (Column 3, line 5) with molecular weights in the range of 500 to 16,000 (Column 3, line 64), b) a low molecular weight diamine chosen from ethylene diamine or isophorone diamine (Column 5, lines 39-40), c) aliphatic diisocyanates (Column 4, lines 47-52), d) a low molecular weight diol with a molecular weight between 32 to 500 g/mol (Column 4, line 47-52), and an e) amine chain terminating agent (Column 5, lines 37-42) wherein the ratio of isocyanate to isocyanate-reactive groups is approximately 4:1 to 1.2:1 (Column 4 lines 31-34).

Blum further discloses that the components a)-d) are added together at a temperature between 60 to 120°C and during the chain extension step the temperature is lowered from room temperature to 60°C (Column 6, lines 31-36 and Column 7,

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Example 1) and that the molecular weight of the polyurethane coating is preferably between 4,000 and 500,000 (Column 6, lines 63-64) and that coating composition comprises a solvent (Column 6, lines 40-45). Blum further discloses that the polyurethane can be applied to plastic substrates and are useful in ink printing laminates (Column 7, lines 7-9, 21-32).

Blum is silent on the degree of urethanisation between 20 and 30%. In view of the substantially identical compositions, the composition would possess the claimed 20 and 30% degree of urethanisation. Since the PTO does not have proper means to conduct experiments, the burden of proof is now shifted to applicants to show otherwise. **In re Best**, 562 F. 2d 1252, 195 USPQ 430 (CCPA 1977); **In re Fitzgerald**, 205 USPQ 594 (CCPA 1980).

Blum does not expressly disclose adding a mixture of diamines as the chain terminating agent and the method of the addition.

House et. al discloses chain extender diamines of the classes di(alkylamino) cyclohexane and isophorone diamines and mixtures thereof (Column 2, lines 38-42) wherein the ratio of the second diamine and isophorone diamine is approximately 5:1 (Column 9, table 2) and the ratio of the isocyanate terminated prepolymer to the diamine mixture is approximately 75% to 100% by weight of the B-side added to the prepolymer (A-side) in the case where a full prepolymer is used (Column 7, lines 45-49).

Blum and House are analogous art because they are from the same field of endeavor with respect to compositions of polyurethane resins comprising diisocyanates, polyols, amines and their use as coatings for plastic substrates.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to utilize the claimed method steps in Blum et. al in order to create a polyurethane coating based on the fact that both House et. al. and Blum et. al. have analogous compositions, are drawn to similar applications, and one would reasonably expect to utilize the method of House et. al. for the composition of Blum et. al.

5. Claims 31-32 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,251,988 to *Blum et. al.* in view of U.S. Patent No. 6,403,752 to *House et. al.* as applied to claim 17 above, and further in view of U.S. Patent No. 6,642,343 to *Gilles et. al.*

Blum et. al. and House et. al do not expressly disclose a laminate carrying a printed layer and the method of producing.

Gilles et. al. discloses polyurethane coating composition useful for creating a laminate by applying the polyurethane ink composition to a plastic substrate, followed by application of an adhesive on the dried and/or cured polyurethane layer and finally to the adhesive with a covering layer and producing the laminate by applying at least a second substrate on the adhesive (Column 19, lines 5-30).

House et. al. and Gilles et. al. are analogous art because they are from the same field of endeavor with respect to polyurethane coating compositions based on the reaction product of polyether polyol, butanediol, isophorone diamine, and optionally chain terminating compounds.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to utilize the same method steps of Gilles et. al. and House et. al. in order

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to create a printed ink laminate based on the fact that both Gilles and House have analogous compositions, are drawn to similar applications, and one would reasonably expect to utilize the method of Gilles for the compositions of House.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL LEONARD whose telephone number is (571)270-7450. The examiner can normally be reached on Monday to Friday, 8:00am EST to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on 5712721376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner
Art Unit 4131

/MICHAEL LEONARD/
Examiner, Art Unit 4131